



R22 Regulation

Subject code: 4E4AA

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A+' Grade)

B.Tech IV Semester Supplementary Examinations, December 2024
ENGINEERING GEOLOGY
 (CIVIL ENGINEERING)

Maximum Marks: 60

Date: 03.12.2024

Duration: 3 hours

- Note:**
1. This question paper contains two parts A and B.
 2. Part A is compulsory which carries 10 marks. Answer all questions in Part A.
 3. Part B consists of 5 Units. Answer any one full question from each unit.
 4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A		CO	Bloom Tx
All the following questions carry equal marks (10x1M=10 Marks)			
1.a)	How would you differentiate physical weathering and chemical weathering?	1	L2
b)	Why structural geology is important in civil engineering construction?	1	L2
c)	Distinguish rock and mineral.	2	L2
d)	What is meant by Moh's scale of hardness.	2	L2
e)	How do you classify rocks? Give examples.	3	L2
f)	Define Metamorphism.	3	L2
g)	Compare water table and perched water table.	4	L2
h)	Write the factors that cause landslides?	4	L2
i)	Write the factors which are contributing to the success of a reservoir?	5	L2
j)	What is overbreak in tunneling? How can it be controlled?	5	L2
Part-B		CO	Bloom Tx level
Answer All the following questions. (5X10M=50Marks)			
2	a. Explain some of the tunnel and bridge failures due to geological drawbacks. [5M]	1	L2
	b. How would you explain the significance of weathering of rocks with reference to tunnels. [5M]	1	L2
OR			
3	a. Explain what are the products of the rock weathering. [5M]	1	L2
	b. Explain the significance of physical geology and petrology in civil engineering? [5M]	1	L2
4	a. Explain the physical properties of Feldspar and Calcite? [5M]	2	L2
	b. Explain what are the various types of forms in minerals [5M]	2	L2
OR			
5	a. List and explain the physical properties of minerals with examples? [5M]	2	L2
	b. Explain the physical properties of Chlorite and Graphite? [5M]	2	L2

6	a. Classify the Phaneritic and Aphaneritic textures of igneous rocks with a short description of each texture? [5M]	3	L2
	b. Explain the megascopic and microscopic characters of basalt. [5M]	3	L2
OR			
7	a. Explain the following structures of metamorphic rock with a neat sketch. i) Schistose Structure ii) Granulose Structure [5M]	3	L2
	b. Explain what are the megascopic and microscopic characters of granite. [5M]	3	L2
8	a. What do you understand by unconformity. Explain its significance in civil engineering. [5M]	4	L2
	b. Show the typical soil profile with a short description of each zone? [5M]	4	L2
OR			
9	a. Illustrate the strike and dip with a neat sketch. [5M]	4	L2
	b. Explain the cone of depression with a neat sketch. [5M]	4	L2
10	a. Analyze the reasons for the failure of some of the Indian dams in the past? [5M]	5	L4
	b. Summarize the purpose of tunneling and explain about lining of tunnels [5M]	5	L2
OR			
11	a. List the contributing factors for the success of a reservoir. [5M]	5	L2
	b. Explain the Gravity Dam and Buttress dams with figures. [5M]	5	L2